Unit 9

Southeast Drum and Croaker Fisheries

Introduction

Important species in this unit are the Atlantic croaker, spot, red drum, black drum, kingfishes (whiting), spotted seatrout, and other seatrouts. The drum family includes several commercially and recreationally important fishes that have been harvested since at least the late-1800s when commercial landings were first estimated. Other fisheries are much more recent. A classic example is the popularity of "blackened redfish" in the 1980s which stimulated a significant demand for red drum so that in a few years the stock became seriously depleted.

Most drum and croaker are harvested in state waters and are therefore under state management. In recent years, several states have set regulations favoring recreational use of some species, such as the red drum.

Commercial adult red drum purse seining in Federal waters of the Gulf of Mexico developed rapidly in the mid-1980s as demand grew for "blackened redfish." Before that, nearly all red drum were harvested in nearshore state waters as juveniles. But as the offshore fishery developed, it became clear that the schooling adult redfish were extremely vulnerable to heavy harvests. Analyses showed that sustainability of long-term potential yields for this fishery requires limiting the harvest of the larger adult fish. In addition, greater inshore redfish catches by recreational and commercial fishermen, complicated by other factors, have cut the number of young fish that could have replenished offshore adult stocks.

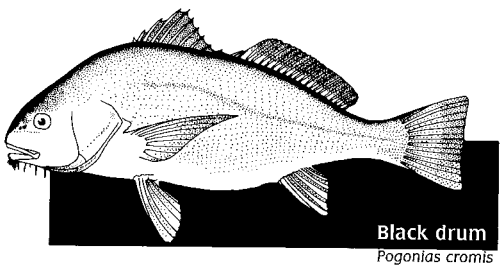
Eventually a Red Drum FMP was developed for the Gulf of Mexico and, later, for Atlantic waters. Both plans ban red drum fishing in Federal waters until the adult population increases in size. This effectively bars a significant adult red drum fishery in Federal waters as long as state regulations favor inshore fishing for young red drum. State actions so far have preserved inshore harvests and allocated most or all of the catch to sport fishermen.

Table 9-1. Southeast Drum and Croaker

Productivity in metric tons and status of fisheries resources

Species / Area	Recent Average Yield (RAY)[1]	Current Potential Yield (CPY)[2]	Long-Term Potential Yield (LTPY)[2]	Fishery Utilization Level	Stock Level Relative to LTPY
Black drum	2,626	Unknown	Unknown	Unknown	Unknown
Atlantic croaker	2,340	Unknown	50,000	Over	Below
Spot	2,682	Unknown	Unknown	Unknown	Unknown
Red drum					
Gulf of Mexico	3,630	3,630	7,900	Over	Below
Atlantic	597	Unknown	Unknown	Over	Below
Seatrouts	10,568	Unknown	Unknown	Unknown	Below
Kingfishes	1,990	Unknown	Unknown	Unknown	Unknown
Total	16,785	16,785	68,715		

[1] 1991-93 average.
[2] LTPY is probably greatly underestimated and CPY overestimated; although production estimates are not available for most species groups; many are probably overutilized.
[3] Grey seatrout is overfished, but other species in this group are not.



Black drum
Pogonias cromis

Species and Status

Commercial drum landings peaked in 1956 at over 32,000 t, more than 20,000 t above the 1953 level. That great increase was stimulated by development of raw material sources for the pet food industry from the northern Gulf of Mexico. Atlantic croaker was sought for pet food as well, and about 76% of the associated landings were croaker and sand and silver seatrout. This pet food catch was reported with the "industrial fishery" data after 1956, and estimates of its size and value have since been unavailable. Status and potential yields for the major species are given in Table 9-1.

The ex-vessel revenue from this group for human consumption was about $10 million in 1978. This increased to about $22 million in 1986, largely as a result of an increase in the price of the fish. The overall sport catch of these species has been about equal to the commercial harvest for human consumption (Fig. 9-1).

Observed changes in red drum mean weight of the harvest and increased incidence of

angler releases are expected results of the conservation efforts taken by the states to increase escapement rates and rebuild the spawning stock. Current statistics provide evidence that the conservation actions are having the desired effect of reducing fishing mortality on the stock. Fishery-independent sampling is underway in Texas, Louisiana and Mississippi, and the data clearly document increased survival of juvenile red drum in inshore waters. These data are supplemented by the findings of mark-recapture programs that show decreasing fishing mortality from Texas to Florida subsequent to the implementation of conservation actions by the states. In addition, the abundance of newly recruited adults has increased in recent samples of the offshore stock. All of these results suggest that conservation measures taken have substantially increased escapement of juveniles to the adult stock.

Red drum assessments are consistent with previous findings of high fishing mortality on juveniles prior to the implementation of conservation actions after about 1986. Estimates of escapement rates (the probability of surviving fishing through age 3) declined from an average of about 10% in the early-1980s to about 1% in 1986 and 1987. Estimates of escapement increased thereafter to be above 40% in 1991. If fishing mortality remains constant at the 1991 level then spawning potential ratio will reach about 20% in 1997. These estimates may be conservative depending on the causes of increased escapement rate after the low 1987-1988 estimate. These factors are currently being evaluated.

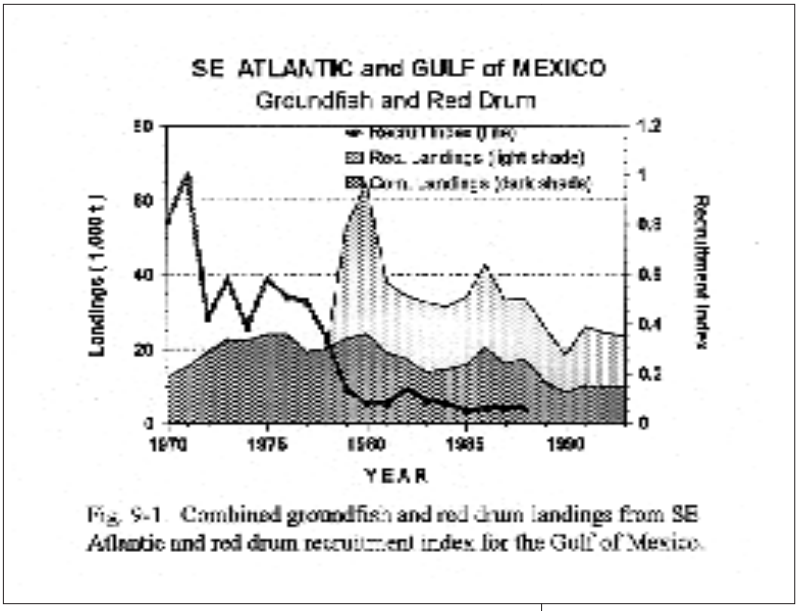


Fig. S-1 Combined groundfish and red drum landings from SE Atlantic and red drum recruitment index for the Gulf of Mexico.

Issues

Bycatch

Bycatch of these resources in the shrimp fishery has a significant impact on their status. Large numbers of Atlantic croaker, spot, and seatrout are caught and discarded dead from shrimp trawls. As many as 500 million spot, 1 billion seatrout, and 7.5 billion croaker are discarded. These species constitute the bulk of the finfish bycatch that averaged about 175,000 t during the 1980s. NOAA Fisheries and the fishing industry have been working together to develop gear designs which will reduce the bycatch. Several promising solutions are under development. ❑

SE Groundfish & Red Drum Commercial Landings (t)

1992	9,900
1993	9,800

SE Groundfish & Red Drum Recreational Landings (t)

1992	4,400
1993	13,600